IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

(Our Case No. 04-06)

In the application of:	)
Yun Namkoong et al.	)
	)
Serial No.: 10/797,384	) Examiner: Hung Q. Dang
	)
Filed: March 10, 2004	) Group Art Unit: 2621
	)
For: Method and Apparatus for Retrying Reading or	)
Writing of Data	)

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY BRIEF BY APPELLANT

In response to the Examiner's Answer mailed on February 2, 2010, the Applicants hereby

present their Reply Brief by Appellant.

In addition, this Reply Brief is requested to be a substitute brief replacing the original

brief filed on September 28, 2009 for including a response to Examiner's arguments in the

Examiner's Answer sent on February 2, 2010.

I. Real Party in Interest

The real party in interest is Samsung Electronics Co., Ltd., the assignee of record and having a place of business in Suwon-si, Republic of Korea.

II. Related Appeals and Interferences

None.

III. Status of Claims

Claims 4, 6, 10-11, 15, 17, and 21-22 have been canceled. Claims 1-3, 5, 7-9, 12-14, 16, and 18-20 remain rejected in this application, of which claims 1 and 12 are independent claims.

Claims 1-3, 5, 7-9, 12-14, 16, and 18-20 are on appeal.

IV. Status of Amendments

The claims have not been amended after the Final Rejection.

V. Summary of Claimed Subject Matter

Independent claims 1 and 12 are a method and apparatus for retrying reading or writing of data within one of a required time period or a predetermined maximum number of retries *in* *both cases* of the data being and not being of a predetermined type of data.

In particular, independent claim 1 recites a method of retrying reading or writing of data, comprising:

A. determining a required time period for performing a retrying type of reading or writing of the data; **[Step 52 of FIG. 3, page 7, lines 9-17 of the Present Application.]**

B. terminating retrying of reading or writing of the data if the required time period is greater than a remaining retrying limitation time; **[Step 54 of FIG. 3, page 7, lines 18-24 of the Present Application.]**

determining whether the data is a predetermined type of data; **[Step 38 of FIG. 2, page 6, lines 3-6 of the Present Application.]**

performing the steps A and B only if the data is the predetermined type of data and not

performing following steps C, D, and E if the data is the predetermined type of data: **[Step 40 of**

FIG. 2 and Steps 50-58 of FIG. 3 and page 6, line 7 to page 8, line 13 of the Present

Application.]

C. determining a total count of retries for the reading or writing of the data; **[Step 76 of**

FIG. 4 and page 8, lines 32-34 of the Present Application.]

D. performing another retry if the total count of retries is not greater than a

predetermined maximum number of retries; **[Step 78 of FIG. 4 and page 9, lines 1-10 of the**

Present Application.]

E. terminating retrying of reading or writing of data if the total count of retries is greater

than the predetermined maximum number of retries; and **[Step 78 of FIG. 4 and page 9, lines 1-**

4 of the Present Application.]

performing steps C, D, and E only if the data is not the predetermined type of data; **[Step**

42 of FIG. 2, Steps 70-78 of FIG. 4, and page 8, line 14 to page 9, line 16 of the Present

Application.]

wherein a same order of retry types is followed according to a retry table for both when

the data is the predetermined type and when the data is not the predetermined type, **[Table 1 of**

page 6 of the Present Application.]

and wherein a retry of reading or writing of the data with one of the required time period

in step A or the predetermined maximum number of retries in step D is performed after the step

of determining the type of data and **_in both cases_** of the data being and not being of the

predetermined type of data. [Steps 38, 40, and 42 of FIG. 2, page 6, lines 4-10, page 11, lines 23-24, and page 13, lines 11-19 of the Present Application.]

In addition, claim 12 recites an apparatus for retrying reading or writing of data, comprising:

a required time selection portion for determining a required time period for performing a retrying type of reading or writing of the data; [See the Required Time Selection Portion 220 in FIG. 8 of the Present Application for performing this function step (page 12, lines 21-25 of the Present Application).]

means for terminating retrying of reading or writing of the data if the required time period is greater than a remaining retrying limitation time only when the data is of a predetermined type; [The Time Comparing Portion 230 in FIG. 8 of the Present Application is the means for performing this function step (page 12, line 29 to page 13, line 10 of the Present Application).]

a data identification unit for determining whether the data is the predetermined type of data; [See the Data Identification Unit 160 in FIG. 5 of the Present Application for performing this function step (page 11, lines 23-27 of the Present Application).]

a counting portion for determining a total count of retries of reading or writing of the data; [See the Counting Portion 320 in FIG. 10 of the Present Application for performing this function step (page 14, lines 12-16 of the Present Application).]

means for performing another retry if the total count of retries is not greater than a predetermined maximum number of retries only when the data is not the predetermined type of data; [The Number Comparing Portion 330, the Second Retrying Type Determination

Portion 300, and the Second Instruction Portion 310 in FIG. 10 of the Present Application are the means for performing this function step (page 14, lines 17-23 of the Present Application).]

means for terminating retrying of reading or writing of data if the total count of retries is greater than the predetermined maximum number of retries *only when* the data is not the predetermined type of data; and **[The Number Comparing Portion 330, the Second Retrying Type Determination Portion 300, and the Second Instruction Portion 310 in FIG. 10 of the Present Application are the means for performing this function step (page 14, lines 23-25 of the Present Application).]**

means for following a same order of retry types according to a retry table for both when the data is the predetermined type and when the data is not the predetermined type; and **[The Reading Performing Unit 130 and the Writing Performing Unit 140 in FIG. 5 and the Required Time Storage Portion 210 and the Required Time Selection Portion 220 in FIG. 8 and Table 1 of page 6 of the Present Application are the means for performing this function step.]**

means for performing a retry of reading or writing of the data with one of the required time period or the predetermined maximum number of retries after determining the type of data and *in both cases* of the data being and not being of the predetermined type of data. **[The First Instruction Portion 170 and the Second Instruction Portion 180 in FIG. 5 of the Present Application are the means for performing this function step (page 11, lines 28-30 and page 13, lines 11-14 of the Present Application).]**

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VI. Grounds of Rejection to be Reviewed on Appeal

Whether claims 1, 3, 5, 8-9, 12, 14, 16, and 19-20 are unpatentable under 35 U.S.C.

103(a) over U.S. Patent Publication No. US 2001/0038704 to Ito et al. (hereafter referred to as

"Ito") in view of U.S. Patent No. 6,625,755 to Hirata et al. (hereafter referred to as "Hirata").

Whether claims 2 and 13 are unpatentable under 35 U.S.C. 103(a) as being unpatentable

over Ito and Hirata further in view of Makita et al. (JP Application No. 10-138420).

Whether claims 7 and 18 are unpatentable under 35 U.S.C. 103(a) as being unpatentable

over Ito and Hirata further in view of Sato et al. (JP Application No. 09-217835).

VII. Argument

The Examiner has rejected claims 1, 3, 5, 8-9, 12, 14, 16, and 19-20 as being

unpatentable under 35 U.S.C. 103(a) over U.S. Patent Publication No. US 2001/0038704 to Ito et

al. (hereafter referred to as "Ito") in view of U.S. Patent No. 6,625,755 to Hirata et al. (hereafter

referred to as "Hirata").

A. Overview of Ito

Ito is directed to *__preventing interruption__* of processing of audio visual (AV) data by

__omitting__ any retry process when data is determined to be AV data.

For example paragraphs [0009] and [0010] of Ito state:

> [0009] Whereas, the AV data comprises image data or sound data, and it is
> important that the data is recorded and reproduced *__without interruption__*....
> [0010] Further, when the image data is reproduced, if the retry processing is
> carried out, the image which is in reproducing is *__interrupted__* for a time during the
> retrying.... (Emphasis Added.)

Again, paragraph [0019] of Ito states:

> [0019] In this data recording and reproducing apparatus, even if an OS or a file
> system detects a defect during the writing processing for example, the recording is
> continued *__without being interrupted__* by keeping writing sequentially while skipping the
> defective sector in accordance with the kind of data,.... (Emphasis Added.)

Also, paragraph [0021] of Ito states:

> [0021] ....Further, by executing the retry processing for the defect position in
> accordance with the kind of data after the data is read out, it is possible to *__avoid__*
> *__interruption__* of reading-out of data whenever a defect is detected.... (Emphasis Added.)

Additionally, paragraphs [0073] and [0074] of Ito again state:

> [0073] Therefore, whenever a defect is detected (in the conventional method), the
> reading-out of data is *__interrupted__*....
> [0074] Therefore, the reading-out of data is *__not interrupted__* whenever a defect is
> detected unlike the conventional method, the entire processing time is shortened

correspondingly…. (Emphasis Added.)

Accordingly, Ito repeatedly states an intended purpose of eliminating interruption during processing of AV data.

Furthermore, Ito repeatedly states avoiding interruption during processing of AV data by omitting a retry process when processing AV data.

For example, the Abstract of Ito states:

> ….Therefore, in the case of data whose reading-out continuity is more important than reliability, the retry process is **_omitted_**, so that time required for reading-out processing can be shortened. In the case of data whose recording continuity is more important than reliability, the verifying processing is **_omitted_** so that time required for writing processing can be shortened.
> (Emphasis Added.)

Repeatedly again, paragraph [0015] of Ito states:

> [0015]….Therefore, in the case of data whose reading-out continuity is more important than reliability, the retry processing is **_omitted_**, and the reading-out processing time can be shortened. (Emphasis Added.)

Repeatedly again, paragraph [0017] of Ito states:

> [0017]….Therefore, in the case of data whose recording continuity is more important than reliability, the verifying process is **_omitted_**, and the writing processing time can be shortened. (Emphasis Added.)

Repeatedly again, paragraph [0023] of Ito states:

> [0023] According to the data reading-out method, it is determined whether the retry processing for the defect should be executed depending upon the determined kind of data, and when it is determined that **_the retry processing should not be executed_**, the reading-out of data next to the series of data is continued, and when it is determined that the retry processing should be executed, the retry processing for the detected defective sector is executed.
> (Emphasis Added.)

Repeatedly again, paragraph [0057] of Ito states:

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[0057] On the other hand, when the digital watermark is embedded in the data, it is determined Yes in step A14, and it is determined that the data is the AV data. In this case, the CPU 12 completes the processing *without carrying out the verifying* processing for the AV data.
(Emphasis Added.)

Repeatedly again, paragraph [0058] of Ito states:

[0058] ....With this feature, the verifying processing is *omitted* when the data is the AV data which regards continuity as more important than the reliability, so that time required for writing processing can be shortened.
(Emphasis Added.)

Repeatedly again, paragraph [0069] of Ito states:

[0069] ....In this case, the CPU 12 completes the processing, *without carrying out the retry processing* for the AV data irrespective whether or not there is a defect.
(Emphasis Added.)

Repeatedly again, paragraph [0070] of Ito states:

[0070] ....In this manner, the data judging section 16 determines whether the data is the D data or the AV data depending upon whether the digital watermark exists, and *only when the data is D data, the retry processing for the defect position is carried out*. With this feature, the retry processing is *omitted* when the data is AV data whose continuity is more important than reliability, so that time required reading-out processing can be shortened.
(Emphasis Added.)

Repeatedly again, paragraph [0074] of Ito states:

[0074] ....Further, in case of the AV data, the retry processing itself is *not carried out*. Therefore, although the reproduced pictures may become messy a little, there is no inconvenience such as stopping reproducing many times as in the conventional method.
(Emphasis Added.)

In summary, Ito *repeatedly* touts omitting any retry process for processing AV data for its

intended purpose of avoiding interruption during processing of AV data.

B. Overview of Hirata

Hirata is directed to the host computer 10 dictating the type and value of the retry

parameter N or T to be used *before* any read/write command is even received at the disk

apparatus 20. For example, the Abstract of Hirata states:

> ....the retrying limit value set in the retrying table from ***the host computer*** is used
> to optimize the retrying processing for data having different reliability or real time
> property of access such as management data and image/audio data stored in each of the
> storage areas A, B and the like individually. (Emphasis added.)

In addition, col. 5, lines 57-67 of Hirata again states:

> First, when start such as boot of an information processing system is performed
> (step 101), the host computer 10 performs device recognition connection of the magnetic
> disk apparatus 20 placed thereunder (step 102). Then, ***the host computer 10*** performs
> setting of mode parameters using the command description block 30-1 and the vender
> unique mode parameter 30-2 as exemplified in FIG. 3 to the magnetic disk apparatus 20
> as a part of an ***initialization sequence*** of the interface such as the SCSI, so that the
> ***retrying limit*** value 21d or the like is set in each of the plurality of storage areas A, B,
> ...(step 103). (Emphasis added.)

Furthermore, col. 6, line 64 to col. 7, line 7 of Hirata again states:

> First, when start such as boot of an information processing system is performed
> (step 201), the ***host computer 10*** performs device recognition for recognizing connection
> of the magnetic disk apparatus 20 placed thereunder (step 202). Then, the host computer
> 10 performs setting of mode parameters using the command descriptor block 30-1 and
> the vendor unique mode parameter 30-2 as exemplified in FIG. 3 to the magnetic disk
> apparatus 20 as a part of an ***initialization sequence*** of the interface such as the SCSI, or
> that the ***retrying limit*** value 21d or the like is set in each of the plurality of storage areas
> A, B, ...(step 203). (Emphasis added.)

In summary, Hirata simply discloses the host computer 10 determining use of a

predetermined number of retries N or a time limit T to limit the retrying process during

initialization.

Furthermore, Hirata illustrates two main embodiments in FIGS. 5 and 6. FIG. 5 of Hirata

shows the embodiment of performing retries up to a respective maximum number N that is

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higher for data in storage area A having management data than a respective maximum number N

that is lower for data in storage area B having image/audio data as stated at col. 6, lines 42-60 of

Hirata for describing FIG. 5 of Hirata:

> With the above control of the number of times of retrying operations, the numbers of times N of retrying operations for limits are set to be *different values* as the retrying limit value 21d depending on the storage area A of the magnetic disk 23 in which data such as management data requiring high reliability are stored and the storage area B in which data such as image data of which real-time property for reading operations is regarded as important are stored *(in this case, N for the storage area A > N for the storage area B)*..... (Emphasis Added.)

Similarly, FIG. 6 of Hirata shows the embodiment of performing retries up to a respective

time limit T that is higher for data in storage area A having management data than a respective

time limit T that is lower for data in storage area B having image/audio data as stated at col. 7,

lines 44-60 of Hirata for describing FIG. 6 of Hirata:

> In this case, by controlling the time t required for retrying operation as the retrying limit value 21d, the retrying limit values T are set to be *different values* as the retrying limit value 21d depending on the storage area A of the magnetic disk 23 in which data such as management data requiring high reliability are stored and the storage area B in which data such as image data of which real-time property for reading operation is regarded as important are stored *(in this case, T for the storage area A > T for the storage area B)*.... (Emphasis Added.)

Accordingly, Hirata simply discloses the host computer 10 determining use of a

predetermined number of retries N or a time limit T and a value of such a parameter N or T to

limit the retrying process, during initialization *before* any read/write command is even received

at the disk apparatus 20.

Thereafter, a higher value of N (number of retries) is used for retries of non image/audio

data and a lower value of N is used for retries of image/audio data in FIG. 5 of Hirata.

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Alternatively thereafter, a higher value of T (time limit) is used for retries of non image/audio data and a lower value of T is used for retries of image/audio data in FIG. 6 of Hirata.

After completion of the retries to N (steps 112 and 117 in FIG. 5 of Hirata) or to T (steps 213 and 218 in FIG. 6 of Hirata), the type of data as management data or image/audio data is determined for the completely different purpose of determining how to notify of an error.

C. Claims 1, 3, 5, 8-9, 12, 14, 16, and 19-20 are not Obvious over Ito in view of Hirata

In giving an obviousness rejection, the Examiner bears the initial burden of factually supporting a prima facie conclusion of obviousness. (See, MPEP, §2142). To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be *some suggestion or motivation*, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, *the prior art* must teach or suggest *all the claim limitations*. (See, MPEP, §2142.) (Emphasis added.)

The rejection of claims 1 and 12 under 35 U.S.C. §103(a) as being unpatentable over Ito in view of Hirata is not appropriate because these prior art references fail to teach or suggest all the limitations of claims 1 and 12 and because there is no motivation or suggestion in these references to combine or modify these references to the present invention.

On page 8 of the Examiner's Answer dated February 2, 2010, the Examiner states:

> ....Appellant does not specifically point out which limitations of claims 1 and 12 prior art references fail to teach, the Examiner respectfully submits that Applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references....

In response, Appellant hereby specifically points out that claims 1 and 12 recite the following limitations that are not taught by (and even *taught away* by) Ito and/or Hirata:

(I) performing the steps A and B (i.e., using the retry time limit) *only if* the data is the predetermined type of data and not performing following steps C, D, and E (i.e., using the retry number limit) if the data is the predetermined type of data, and performing steps C, D, and E (i.e., using the retry number limit) *only if* the data is not the predetermined type of data; and

(II) that a retry of reading or writing of the data with one of the required time period (in step A) or the predetermined maximum number of retries (in step D) is performed after the step of determining the type of data and *in both cases* of the data being and not being of the predetermined type of data.

In contrast, Ito *teaches away* from such above limitations (II) of claims 1 and 12 because FIG. 2 of Ito and paragraphs [0009], [0010], [0019], [0021], [0073], and [0074] *repeatedly* tout *omitting* any retry when the data is image/audio data, in contrast to the limitation of performing retries *in both cases* of the data being and not being of the predetermined type of data.

Similarly in contrast, Hirata teaches away from such above limitations (I) of claims 1 and 12 because FIG. 5 and col. 6, lines 42-60 of Hirata touts performing retries using the *same one* parameter of maximum limit N (but just with a lower N value for image/audio data) for *both cases* of image/audio data and non-image/audio data. Also, FIG. 6 and col. 7, lines 44-60 of Hirata touts performing retries using the *same one* parameter of time limit T (but just with a lower T value for image/audio data) for *both cases* of image/audio data and non-image/audio data.

Thus, FIGS. 5 and 6 of Hirata *teach away* from performing retries using the time limit T (steps A and B) *only if* the data is the predetermined type of data and not performing retries using the time limit T when the data is not the predetermined type of data, and performing retries using the maximum number N (steps C, D, and E) *only if* the data is not the predetermined type of data, as recited in claims 1 and 12. Rather, FIG. 5 of Hirata touts using the *same one* retry parameter N (maximum number limit) for *both cases* of image/audio data and non-image/audio data, and FIG. 6 of Hirata touts using the *same one* retry parameter T (time limit) for *both cases* of image/audio data and non-image/audio data.

On page 3 of the Office Action dated April 28, 2009, the Examiner combines Hirata and Ito by stating:

> Specifically, the process proceeds as follows: at step B15 of Ito, the data can be detected as either D-data, whose reliability is more important (see [0067]), or AV data, whose continuity is more important (see [0069]). If it is of D-data, the retrying process with predetermined maximum number of retries is performed as shown in the control flow following the "NO" branch of step B15 in Fig. 3 of Ito. Otherwise, it is determined as AV data, and the retrying process with required time period as disclosed and suggested by Hirata would follow the "YES" branch of step B15 of Ito.

The Examiner states that one of ordinary skill in the art would be motivated to incorporate the retrying process of Hirata into the YES branch of step B15 of Ito.

The MPEP, §2141.03(VI) states "PRIOR ART MUST BE CONSIDERED IN ITS ENTIRETY, INCLUDING DISCLOSURES THAT TEACH AWAY FROM THE CLAIMS":

> A prior art reference must be considered in its entirety, i.e., as a whole, including portions that would lead away from the claimed invention.

Ito repeatedly touts at its Abstract and paragraphs [0009], [0015], [0017], [0019], [0021], [0023], [0057], [0058], [0069], [0070], [0073], and [0074] omitting any retrying process at the

"YES" branch of step B15 of Ito for its intended purpose of avoiding any interruption during

processing of AV data. For example paragraphs [0009] and [0010] of Ito state:

> [0009] Whereas, the AV data comprises image data or sound data, and it is important that the data is recorded and reproduced *without interruption*....
> [0010] Further, when the image data is reproduced, if the retry processing is carried out, the image which is in reproducing is *interrupted* for a time during the retrying.... (Emphasis Added.)

Again, paragraph [0019] of Ito states:

> [0019] In this data recording and reproducing apparatus, even if an OS or a file system detects a defect during the writing processing for example, the recording is continued *without being interrupted* by keeping writing sequentially while skipping the defective sector in accordance with the kind of data,.... (Emphasis Added.)

Also, paragraph [0021] of Ito states:

> [0021] ....Further, by executing the retry processing for the defect position in accordance with the kind of data after the data is read out, it is possible to *avoid interruption* of reading-out of data whenever a defect is detected.... (Emphasis Added.)

Additionally, paragraphs [0073] and [0074] of Ito again state:

> [0073] Therefore, whenever a defect is detected (in the conventional method), the reading-out of data is *interrupted*....
> [0074] Therefore, the reading-out of data is *not interrupted* whenever a defect is detected unlike the conventional method, the entire processing time is shortened correspondingly.... (Emphasis Added.)

Futhermore, the Abstract of Ito states:

> ....Therefore, in the case of data whose reading-out continuity is more important than reliability, the retry process is *omitted*, so that time required for reading-out processing can be shortened. In the case of data whose recording continuity is more important than reliability, the verifying processing is *omitted* so that time required for writing processing can be shortened.
> (Emphasis Added.)

Repeatedly again, paragraph [0015] of Ito states:

> [0015]....Therefore, in the case of data whose reading-out continuity is more important than reliability, the retry processing is *omitted*, and the reading-out processing time can be shortened. (Emphasis Added.)

Repeatedly again, paragraph [0017] of Ito states:

> [0017]....Therefore, in the case of data whose recording continuity is more important than reliability, the verifying process is *omitted*, and the writing processing time can be shortened. (Emphasis Added.)

Repeatedly again, paragraph [0023] of Ito states:

> [0023] According to the data reading-out method, it is determined whether the retry processing for the defect should be executed depending upon the determined kind of data, and when it is determined that *the retry processing should not be executed*, the reading-out of data next to the series of data is continued, and when it is determined that the retry processing should be executed, the retry processing for the detected defective sector is executed.
> (Emphasis Added.)

Repeatedly again, paragraph [0057] of Ito states:

> [0057] On the other hand, when the digital watermark is embedded in the data, it is determined Yes in step A14, and it is determined that the data is the AV data. In this case, the CPU 12 completes the processing *without carrying out the verifying* processing for the AV data.
> (Emphasis Added.)

Repeatedly again, paragraph [0058] of Ito states:

> [0058] ....With this feature, the verifying processing is *omitted* when the data is the AV data which regards continuity as more important than the reliability, so that time required for writing processing can be shortened.
> (Emphasis Added.)

Repeatedly again, paragraph [0069] of Ito states:

> [0069] ....In this case, the CPU 12 completes the processing, *without carrying out the retry processing* for the AV data irrespective whether or not there is a defect.
> (Emphasis Added.)

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Repeatedly again, paragraph [0070] of Ito states:

[0070] ....In this manner, the data judging section 16 determines whether the data is the D data or the AV data depending upon whether the digital watermark exists, and *only when the data is D data, the retry processing for the defect position is carried out*. With this feature, the retry processing is *omitted* when the data is AV data whose continuity is more important than reliability, so that time required reading-out processing can be shortened.
(Emphasis Added.)

Repeatedly again, paragraph [0074] of Ito states:

[0074] ....Further, in case of the AV data, the retry processing itself is *not carried out*. Therefore, although the reproduced pictures may become messy a little, there is no inconvenience such as stopping reproducing many times as in the conventional method.
(Emphasis Added.)

Thus, Ito repeatedly and thus strongly teaches away from incorporating the retrying process of Hirata into the YES branch of step B15 of Ito.

In addition, FIGS. 5 and 6 of Hirata *teach away* from performing retries using the time limit T (steps A and B) *only if* the data is the predetermined type of data and not performing retries using the time limit T when the data is not the predetermined type of data, and performing retries using the maximum number N (steps C, D, and E) *only if* the data is not the predetermined type of data, as recited in claims 1 and 12.

Rather, FIG. 5 of Hirata touts using the *same one* retry parameter N (maximum number limit) for *both cases* of image/audio data and non-image/audio data, and FIG. 6 of Hirata touts using the *same one* retry parameter T (time limit) for *both cases* of image/audio data and non-image/audio data. Hirata simply discloses the host computer 10 determining use of a predetermined number of retries N or a time limit T and a value of such a parameter N or T to

limit the retrying process, during initialization ***before*** any read/write command is even received at the disk apparatus 20.

In fact, note that the type of data is not even determined until ***after*** the retry process is completed at step 117 of FIG. 5 of Hirata and at step 218 of FIG. 6 of Hirata for the completely different purpose of determining how to notify of an error.

In summary, given such repeated and strong teachings away from Ito and Hirata, one of ordinary skill in the art would not be motivated to combine the retrying process of Hirata into the YES branch of step B15 of Ito to result in all of the limitations of claims 1 and 12.

Accordingly, a prima facie conclusion of obviousness of claims 1 and 12 cannot be established because Hirata and/or Ito fail to teach or suggest, and even ***repeatedly*** and strongly teach away, from all the limitations of claims 1 and 12, and the rejection of claims 1 and 12 under 35 U.S.C. §103(a) should be withdrawn.

Claims 3, 5, 8, and 9 which depend from and further limit claim 1, are allowable for at least the same reasons that claim 1 is allowable as stated above.

Claims 14, 16, 19, and 20 which depend from and further limit claim 12, are allowable for at least the same reasons that claim 12 is allowable as stated above.

C. Rejection of Claims 2, 7, 13, and 18 under 35 U.S.C. §103(a)

Claims 2 and 7 which depend from and further limit claim 1, are allowable for at least the same reasons that claim 1 is allowable as stated above.

Claims 13 and 18 which depend from and further limit claim 12, are allowable for at least the same reasons that claim 12 is allowable as stated above.

Conclusions

Please feel free to contact the undersigned should any questions arise with respect to this case that may be addressed by telephone.

Respectfully submitted,
for the Applicant(s)

Dated: <u>March 31, 2010</u>   By: _____

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CERTIFICATE OF MAILING

The undersigned hereby certifies that the foregoing APPELLANT'S APPEAL BRIEF is

being deposited in the United States Postal Service, as first class mail, postage prepaid, in an

envelope addressed to Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450,

on this <u>31st</u> day of <u>March,</u> 2010.

_____

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Claims Appendix

Claim 1: A method of retrying reading or writing of data, comprising:

A. determining a required time period for performing a retrying type of reading or writing of the data;

B. terminating retrying of reading or writing of the data if the required time period is greater than a remaining retrying limitation time;

determining whether the data is a predetermined type of data;

performing the steps A and B only if the data is the predetermined type of data and not performing following steps C, D, and E if the data is the predetermined type of data:

C. determining a total count of retries for the reading or writing of the data;

D. performing another retry if the total count of retries is not greater than a predetermined maximum number of retries;

E. terminating retrying of reading or writing of data if the total count of retries is greater than the predetermined maximum number of retries; and

performing steps C, D, and E only if the data is not the predetermined type of data;

wherein a same order of retry types is followed according to a retry table for both when the data is the predetermined type and when the data is not the predetermined type,

and wherein a retry of reading or writing of the data with one of the required time period in step A or the predetermined maximum number of retries in step D is performed after the step of determining the type of data and in both cases of the data being and not being of the predetermined type of data.

Claim 2: The method of claim 1, further comprising:

starting to time down from the retrying limitation time after a request for reading or writing of the data is generated.

Claim 3: The method of claim 1, further comprising:

determining whether an error has occurred during an initial reading or writing of the data or during a prior retry of reading or writing of the data; and

performing steps A and B if said error has occurred.

Claim 4 (**Canceled**).

Claim 5: The method of claim 1, wherein the predetermined type of data is A/V (audio or video) data.

Claim 6 (**Canceled**).

Claim 7: The method of claim 1, further comprising:

determining the retrying type of reading or writing from a sequential order of retrying types as stored within a lookup table; and

determining the required time period for the retrying type from the lookup table.

Claim 8: The method of claim 1, further comprising:

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performing a retry of reading or writing the data for the retrying type if the required time period is not greater than the remaining retrying limitation time.

Claim 9: The method of claim 1, wherein the data is read or written within a hard disc drive.

Claims 10-11 (**Canceled**).

Claim 12: An apparatus for retrying reading or writing of data, comprising:

a required time selection portion for determining a required time period for performing a retrying type of reading or writing of the data;

means for terminating retrying of reading or writing of the data if the required time period is greater than a remaining retrying limitation time only when the data is of a predetermined type;

a data identification unit for determining whether the data is the predetermined type of data;

a counting portion for determining a total count of retries of reading or writing of the data;

means for performing another retry if the total count of retries is not greater than a predetermined maximum number of retries only when the data is not the predetermined type of data;

means for terminating retrying of reading or writing of data if the total count of retries is greater than the predetermined maximum number of retries only when the data is not the predetermined type of data;

means for following a same order of retry types according to a retry table for both when the data is the predetermined type and when the data is not the predetermined type; and

means for performing a retry of reading or writing of the data with one of the required time period or the predetermined maximum number of retries after determining the type of data and in both cases of the data being and not being of the predetermined type of data.

Claim 13: The apparatus of claim 12, further comprising:

a timing unit for starting to time down from the retrying limitation time after a request for reading or writing of the data is generated.

Claim 14: The apparatus of claim 12, further comprising:

means for determining whether an error has occurred during an initial reading or writing of the data or during a prior retry of reading or writing of the data; and

means for performing any retry of reading or writing of the data when said error has occurred.

Claim 15 (**Canceled**).

Claim 16: The apparatus of claim 12, wherein the predetermined type of data is A/V (audio or video) data.

Claim 17 (**Canceled**).

Claim 18: The apparatus of claim 12, further comprising:

a storage portion for storing a lookup table having a sequential order of retrying types used for determining the retrying type and the required time period for the retrying type.

Claim 19: The apparatus of claim 12, further comprising:

means for performing a retry of reading or writing the data for the retrying type if the required time period is not greater than the remaining retrying limitation time.

Claim 20: The apparatus of claim 12, wherein the data is read or written within a hard disc drive.

Claims 21-22 (**Canceled**).

IX. Evidence Appendix

None.

X. Related Proceedings Appendix

None.

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